Amendments to the Specification:

Please replace the paragraph numbered 0002, on page 1, with the following paragraph:

This invention relates to micro-fabricated actuators, and more particularly relates to improving ~~long-stoke~~ long-stroke deflection characteristics.

Please replace the paragraph numbered 0003, on page 1, with the following paragraph:

The advent of micromachining has enabled the economic fabrication of tiny precision micro-actuators and micromachines using techniques first pioneered in the semiconductor industry. Micro-fabricated actuators with long ~~stoke~~ stroke are used in a diverse range of applications including adaptive optics, disk drives, fluidic valves, video displays, and micro-positioning.

Please replace the paragraph numbered 0042, on page 8, with the following paragraph:

FIG. 13a shows a table of torsional spring rigidity based on beam dimensions and material properties of silicon.

Please add the following paragraph just after the paragraph numbered 0042, on page 8:

FIG. 13b illustrates dimensions of a single flexure joined to an actuator body using a simple torsional spring according to the present invention.

Please replace the paragraph numbered 0049, on page 11, with the following paragraph:

The elevation/deflection of the bimorph flexures causes their length projected on to the plane of the substrate to contract. Deflection of the first set of bimorph flexures 601 induces the intermediate frame 605 to rotate clockwise. Likewise, the deflection of the second set of bimorph

flexures 609 induces a counterclockwise rotation between the intermediate frame and the actuator platform. This rotation is counter to the rotation of the first set of bimorphs flexures 601. If the contractions are designed to be equivalent, the actuator segment ~~electrode~~ 612 does not rotate during elevation or actuation. FIG. 7 shows a side view of the second embodiment to detail the elevation of the intermediate frame and the actuator platform.

Please replace the paragraph numbered 0064, on page 17, with the following paragraph:

FIG. 12 illustrates key features of the bimorph flexures that will aid in understanding the advantages of this invention. An isolated bimorph with one end anchored and the other end free is depicted. Note that the free end is not parallel to the substrate but rather at an angle. In contrast, FIG. 3 shows that both ends of the bimorph flexures 310 to be parallel to the substrate 320 in the complete actuator. Hence, there must be a moment on the end of the beam to force the angle from the free position. This moment can warp the platform and the mirror segment if the strain is not relieved. Furthermore, the moment acts against the elevation force of the flexures thereby reducing achievable height from the substrate. Finally, this is a spring hardening geometry, so the suspension is nonlinear and softens with higher actuation voltage thus invoking earlier snap-in during electrostatic actuation. All of these drawbacks may be circumvented by the present invention in the first embodiment. Namely, the torsionally weak attachment points or torsional springs 307 on the flexures allow the flexure ends to have an angle not parallel to the substrate. This strain relief reduced platform warpage, increases ~~stoke~~ stroke height, and reduces spring softening during actuation.

Please replace the paragraph numbered 0065, on page 17, with the following paragraph:

The stiffness of the attachment portion is a function of the material and beam dimensions including height 1301 (h), length 1303 (i), and film thickness (t) as defined in FIG. 13a and as illustrated in FIG. 13b. In an exemplary arrangement, the attachment portions are made of polysilicon. As discussed above, if the stiffness of the attachment portion is too great, it will decrease the overall deflection/elevation of the bimorph flexures and cause unwanted bowing of the actuator segment electrode. Therefore, the present invention provides attachment portion designs with lower stiffness. For purposes of the following discussion, the properties of the attachment are characterized in terms of the angle of twist per unit moment (θ/Nm), which is the inverse of the torsional rigidity (Nm2/θ) over the attachment height (h). These characteristics may be better appreciated from the table of FIG. 13a, which provides examples of selected values.

